--14. (Amended) An apparatus for measuring a medical substance (an antigen) contained in a sample using a resonance phenomenon resonating with an evanescent wave, said apparatus, comprising:

a resonance phenomenon generating section having a resonance material; and

a detecting means for detecting a change of an incident light which is made incident upon said resonance material to generate said resonance phenomenon or a change of a reflected light thereof[; and]

wherein the medical substance (antigen) to be measured is fixed to said resonance material [as an antigen].

19. (Amended) An apparatus according to Claim [2] 14, wherein said resonance phenomenon is a surface plasmon resonance phenomenon.

20. (Amended) An apparatus according to Claim 19, wherein said resonance phenomenon generating section comprises a prism having a high refractive index, a thin metal film directly or indirectly formed on one of the surfaces of said prism as said resonance material, and a light source for making a light incident upon said metal film via said prism, wherein the medical substance (antigen) to be measured is fixed [as an antigen to another] to a surface of said metal film [which is opposite to the surface on which said prism is formed].

21. (Amended) An apparatus according to Claim 20 further comprising a calculating means for recognizing an amount of said medical substance (antigen) contained in said sample in accordance with the change detected by said detecting means.

22. (Amended) A medical substance sensor for use in an apparatus for measuring a medical substance (an antigen) contained in a sample using a resonance phenomenon resonating with an evanescent wave comprising a resonance material where [a] the resonance phenomenon is caused to resonate with an evanescent wave, wherein the medical substance (antigen) to be measured is fixed to said resonance material [as an antigen].

23. (Amended) A medical substance sensor according to Claim 22 further comprising a prism having a high refractive index, a thin metal film which is directly or indirectly formed on one of the surfaces of said prism as said resonance material, wherein the medical substance (antigen) to be measured is fixed [as an antigen to another] to a surface of said metal film [which is opposite to the surface on which said prism is formed].

24. (Amended) A method for measuring a medical substance (an antigen) contained in a sample using a resonance phenomenon resonating with an evanescent wave, said method comprising the steps of:

fixing a medical substance (an antigen) to be measured to a resonance material wherein [a] the resonance phenomenon is caused to resonate with an evanescent wave [as an antigen];

mixing an antibody [which] with said sample wherein the antibody is coupled with said [fixed] medical substance (antigen) in a specific manner [to said sample;

bringing [the] a mixture of said antibody and said sample in contact with the resonance material to which said medical substance (antigen) has been fixed;

making a light incident upon said resonance material;